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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,775	06/24/2005	Daiki Taneichi	000023-066	7180

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BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
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NILAND, PATRICK DENNIS

ART UNIT	PAPER NUMBER
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1714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/20/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/540,775

Applicant(s)

TANEICHI ET AL.

Examiner

Patrick D. Niland

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/06, 6/05, 10/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

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1. Claims 4, 6, 7, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The instant claims 4, 6, 7, and 8 recite "the low melting point glass powder" and depend from claim 1. Claim 1 does not require a "low melting point glass powder" and does not provide antecedent basis for this component. It is therefore unclear if the claims require the "low melting point glass powder" in addition to the "powder" of claim 1 or if the claim is trying to further define the "powder" of claim 1.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1184364 A1 Mitsuzuka et al..

Mitsuzuka discloses a composition falling within the scope of the instant claims at the abstract; page 3, lines 16 and 46-53; page 4, lines 5-54; page 5, lines 1-58 in its entirety; page 6, lines 1-58, particularly 5-7 and 22-24 which contains the instantly claimed ingredients of claims 1-2 and 4; page 7, lines 13-34; page 14, lines 15-25 et seq.; page 15, lines 8-18; page 16, lines

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51-52; page 17, lines 1-15; page 21, lines 21-56; page 39, lines 14-41; and the remainder of the document.

5. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combinations of the teachings of EP 1184364 A1 Mitsuzuka et al., US Pat. No. 5674553 Shinoda et al., and EP 1158019 A2 Uegaki et al..

Mitsuzuka discloses a composition falling within the scope of the instant claims at the abstract; page 3, lines 16 and 46-53; page 4, lines 5-54; page 5, lines 1-58 in its entirety; page 6, lines 1-58, particularly 5-7 and 22-24 which contains the instantly claimed ingredients of claims 1-2 and 4; page 7, lines 13-34; page 14, lines 15-25 et seq.; page 15, lines 8-18; page 16, lines 51-52; page 17, lines 1-15; page 21, lines 21-56 of which the combustion of lines 52-53 refers to the firing after applying to whatever substrate as is typically well known in the art, which falls within the scope of the methods of the instant claims 13-14; page 39, lines 14-41 which encompasses the method of the instant claims 13-14; and the remainder of the document.

It would have been obvious to one of ordinary skill in the art to replace the cellulosic binders or urethane binders of the compositions, articles, and methods of the prior art with the polyurethanes (i) of the instant claims because they are shown by Mitsuzuka et al. (abstract; page 3, lines 46-54; page 21, lines 24-56; and page 39, lines 15-41) to give benefits over the normal cellulosic binders in ceramic compositions which are fired, particularly low tackiness, high shape retention, combustion of the binders at very moderate temperatures with low carbon residue, and the other improved properties of the instantly claimed polyurethane and these benefits would have been expected in the conventional processes and compositions of the instant claims disclosed by Uegaki et al. (abstract; page 2, lines 1-41; page 7, lines 46-58; page 8, lines 1-31;

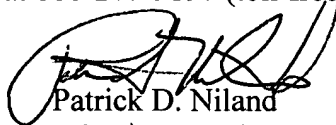
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page 9, lines 49-54; page 10, lines 40-58; page 11, lines 1-31; and the remainder of the document) and Shinoda et al. (column 4, lines 48-62; column 19, lines 1-17; column 20, lines 1-7; and the remainder of the document).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patrick D. Niland  
Primary Examiner  
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